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EIGHTY-TWO physicians from the United States and Canada were present at the British Medical Association. The Association will probably meet in Eastbourne, England, next year.

STATISTICS have been collected by order of the German government to study the effects of the serum treatment of diphtheria. These statistics cover the first three months of 1895, and they are supplied by 232 physicians practicing in 191 hospitals. The percentage of deaths in 2,228 cases was found to be only 17.3.

THE general meeting of the *Social Science Association* is being held at Saratoga during the present week. The opening address by Dr. F. J. Kingsbury is on 'The Tendency of Men to Live in Cities.' The Association meets in the departments of Education, Health, Jurisprudence and Finance, each department having a different day set aside for the presentation of papers.

*The Critic* mentions a report that a posthumous volume of Huxley's essays will be brought out soon. It will contain most of his later writings, including a notable article finished just before his death. *The Life and Letters of Thomas H. Huxley*, edited by his son, is announced.

HENRY HOLT & Co. announce for publication in the autumn an introduction to the geological history of organisms entitled *Geological Biology* by Prof. Henry S. Williams; a laboratory companion to Remsen's 'Introduction to the Study of Chemistry,' entitled *Remsen and Randall's Chemical Experiments*, by Prof. Ira Remsen and Dr. Wyatt W. Randall; *Grasses of North America*, by Prof. W. J. Beal; a new and much enlarged edition of Prof. W. T. Sedgwick and Prof. E. B. Wilson's *General Biology*, and translations of Kerner and Oliver's *Natural History of Plants* (2d Vol.), and of Hertwig's *General Principles of Zoology*.

#### UNIVERSITY AND EDUCATIONAL NEWS.

PROFESSOR MARK W. HARRINGTON has accepted the presidency of the University of Washington.

GEN. J. WATTS DE PEYSTER has provided for the erection of a college of languages for the American University of Washington. The building will bear his name and a bronze statue of the donor will be erected in front of the college.

WE have received the new prospectus of elective studies of Michigan Mining School. It states that the Board of Control and Faculty of the School have unanimously decided to adopt an elective system in the institution for the future, and the prospectus is issued to explain such variations in the course of instruction as will be introduced by this change. The elective system will go into full effect on September 16, 1895.

As stated in our issue of August 9th means of attracting foreign students to the University at Paris are being considered by a Committee specially appointed for the purpose. With this object in view, according to *The Nation* the University confers this year 'diplomas d'études Supérieures d'histoire et de géographie,' which may be obtained by all students including those who have not yet taken the B. A. degree. Students at the University can thus obtain official recognition of their work after having resided at the University for a comparatively short time.

THE announcement of the department of geology and paleontology of Union University for the ensuing year is received. In the advanced work particular attention is given to the paleontology and field geology of New York. During the spring term the last two days of each week were spent in field work, and typical exposures of all the formations ranging from the Potsdam of the Cambrian up to the Catskill of the Devonian were studied. This summer Prof. Prosser is studying the distribution and classifica-

tion of the Upper Devonian in central and eastern New York for the State Survey.

FIVE graduates of Michigan State Agricultural College, who were assistants or instructors, have recently been elected to other positions, as follows: F. B. Mumford, professor of agriculture, State University, Columbia, Mo.; A. T. Stevens, professor of agriculture at Green borough, N. C.; W. L. Rossman, chemist to State Pure-food Commission, Lansing, Mich.; U. P. Hedrick, professor of botany and horticulture, Corvallis, Oregon; A. B. Cordly, professor of entomology, Corvallis, Oregon.

It is stated that Dr. Wilhelm Roux, of Innsbruck, has been called to the chair of anatomy in the University of Halle; Dr. K. Seubert, of Tübingen, to the chair of chemistry in the Technical High School, at Hannover, and Dr. Kallius, of Göttingen, to the chair of anatomy at Tübingen.

D. C. HEATH & Co. have in preparation 'The Connection of Thought and Memory: a Contribution to Pedagogical Psychology,' by H. P. Lukens, Ph. D., with an introduction by Dr. G. Stanley Hall. The work is based on F. W. Dorpfeld's 'Denken und Gedächtniss.'

ACCORDING to the London *Times* the French have unearthed at Delphi the building that Pausanias describes as the 'Treasury of the Athenians;' and here they have discovered the remains of two large slabs of stone inscribed with words and music. In their first season's work they found 14 fragments of various sizes, of which they published an account last year. Four of these fragments were distinguished from the other ten by a difference in the notation of the music; and these four made up the piece that was introduced to the public as 'The Hymn to Apollo.' Fortunately, in their second season's work, the French have found another large fragment, to which the remaining ten can be

adjusted with tolerable certainty; and now we have a second hymn. The decipherment has been intrusted, as before, to MM. Henri Weil and Théodore Reinach, and their version is about to be published in the *Bulletin de Correspondance Hellénique*. The duration of the musical notes is indicated by the syllables that were sung with them. Thus, for example, where three notes are attached to a word of one long syllable followed by two short syllables they must answer roughly to a crotchet followed by two quavers. The pitch of the notes is indicated by various letters of the alphabet. In the first hymn the letters were those that the Greeks prescribed for use with voices; but in this second hymn they are those that were prescribed for use with instruments. As the Delphians would hardly have written down the accompaniment and omitted the song itself, we must suppose that the instruments and voices were here in unison.

ROBERTS BROTHERS will publish in the autumn a work on the history and topography of Constantinople by Professor E. A. Grosvenor, of Amherst College.

THE *Tribune* states that *The American Museum of Natural History* has received twenty skeletons exhumed by Mr. H. I. Smith in Mason County, Ky. The skeletons are in bad condition, but the ornaments and implements, including bone fish-hooks, are said to be of special interest.

A HURRICANE station has been recently established in Yucatan, and observations will be cabled from Mérida to New Orleans. It is hoped that the coöperation of the Mexican Meteorological Bureau will be secured with a view to establishing stations at intervals along the borders of the Gulf.

THE *Scientific American* states that Dr. Cornelius Herz has invented an improvement in telegraphy, by which more than 1,000 words can be transmitted by long

submarine cables in the same time that 20 words can be sent now. Dr. Herz's invention would allow of cabling 50 words at a cost of five cents, and would render submarine telephony and multiplex telephony feasible.

#### CORRESPONDENCE.

##### THE NATURE OF VOWELS.

THERE is one statement in Professor Le Conte's letter in *SCIENCE* (Aug. 16th) which seems to me worth further examination. He writes, "Now it is true that the vowels are true musical tones, but it is not true that each has its own pitch."

In a paper on the voice published in the *Journal of Physiology*, Vol. IV., 1883, I took ground on this subject at variance with the view set forth by Professor Le Conte at least in its most rigid form. I consider his statement a partial truth only.

My paper is not at hand, so I cannot quote from it, but the matter was put somewhat thus: There is but one position of the vocal apparatus—vocal bands and supraglottic parts—one structural and functional combination so far as the human vocal mechanism is concerned for the perfect production of each vowel, and the further this is departed from the greater the deviation from this true and perfect result. It will be noticed that the entire range in pitch in ordinary conversation is very limited, and even in the most exciting dramatic passages the range covers but a few notes. Moreover, the best classic music and the popular songs that are most lasting and effective have a limited range, all of which is a matter of considerable significance, but part of that significance is owing to the fact that the proper production of the vowels in their purity is determined as I have indicated; and the poet, orator, actor, singer or composer who recognizes this principle will prove so far as this can go most successful. Compare such words as 'roar' and 'scream.' What effect would 'roar' produce if spoken or sung at a very high pitch or 'scream' at a very low pitch?

Now, if any one doubts as to this let him make the simple test of singing the vowels o,

u, a, at his highest pitch, and at the same time require some listener to name the vowel he is attempting to produce. I venture to say that there will be some very ludicrous answers, and I think the majority of persons will be convinced then that pitch does go a long way in the *proper* production of vowels. That something more or less like them may be produced at different points in the scale I do not question and, of course, we accept in practice these departures from the proper vocal effect or best result if not too great. WESLEY MILLS.

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##### THE 'DATE OF PUBLICATION' IN THE LIGHT OF THE LAW OF PRIORITY.

THE American Association for the Advancement of Science, in common with its sister organizations in Europe and in Australasia, has repeatedly had occasion to consider the question of scientific nomenclature; and as a result of many deliberations, zoölogists have practically agreed upon a code of rules, which have now been adopted by the International Congress and should be followed by every worker. These rules, as well as their predecessors, contain the so-called law of priority; and in consequence, the entire structure is made to depend on last analysis upon the 'Date of Publication.' How important it is then to define exactly what is meant by this term!

The present rules, adopted by the International Congress through the initiative of Dr. Raph. Blanchard, show a distinct advance in that they declare that the date at which a paper is read before a learned society does not constitute publication in the sense of this law. A thing to be published must be printed. Some still maintain that a memoir is published as soon as it leaves the hands of the author after the last corrections have been made upon it. I am even told that this is the ruling in certain legal cases—patents and the like. It is, however, a date which is in practice impossible to establish, and is consequently wholly unfitted for such a code of rules. These rules are confessedly arbitrary to a certain extent, and it is by no means necessary that we should avoid setting up a somewhat artificial rule in this case as well.